What do the Tutorials Cover?

There are five tutorial files provided with data required to run them. The tutorials are CDAT scripts that give the user a flavor of how scripts work and to give an idea of how to accomplish specific tasks. A brief description of the tutorials follows:

- **getting_started_tutorial.py**
    - **Example 0: The Basics**
        - This example runs through some basic operations such as opening, closing, writing to files, and reading data by location or at specified time intervals. The tutorial is presented with a series of questions and answers in the style of a FAQ.
    - **Example 1: Dealing with Data From Other Sources**
        - This example shows (in excruciating detail) how to read in Fortran formatted data, use it within CDAT, and writing to a netCDF file. Some simple averaging operations are carried out on the data. This example also shows how to change/insert metadata for the variable.
    - **Example 2: Using Masks**
        - This example shows how to generate data masks, applying masks and averaging using area weights.
- **times_tutorial.py**
    - This tutorial demonstrates the uses of the time averaging functions. Basic examples cover topics such as computing the December−February seasonal means, computing the climatology, anomalies (departures) from climatology, construction of seasons not already defined, customization, and use of powerful criteria to specify minimum temporal coverage and data distribution.
- **statistics_tutorial.py**
    - This tutorial covers some of the basic statistical functions such as rms, correlation, mean absolute difference and their usage with climate data.
- **vcs_tutorial.py**
    - This tutorial guides you through some basic plotting functions and features to visualize the data and produce presentation quality output. This is by no means an exhaustive demonstration of features − just a very basic set of capabilities are addressed. Specific examples cover animations, creating and altering graphics methods, creating and altering display templates, producing output files for printing and displaying and changing colormaps etc.
- **xmgrace_tutorial.py**
    - In this tutorial, the interface to the XmGrace utility is demonstrated by showing simple plot generation and customization. XmGrace is a plotting tool developed independent of CDAT and has a wide user base. To download and install XmGrace, see the Grace home page at http://plasma−gate.weizmann.ac.il/Grace